

Serial No. 09/838,553

Docket No. K-0242

Amdt. dated: **February 23, 2005**

Reply to Office Action of November 1, 2004

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A method of handoff in a CDMA communication system, comprising:  
executing a handoff of a call connection of ~~a first information~~ an active voice call of a mobile station from a first base station to a second base station;  
comparing a packet zone identifier of a ~~second information~~ packet data call transmitted from the second base station with a packet zone identifier of a dormant packet data call that is concurrent with the active voice call and maintained by the mobile station, said packet zone identifiers uniquely identifying a packet control function coverage area; and  
transmitting a packet data call initializing message ~~of the second information~~ call from the mobile station to the second base station to request a handoff of the ~~second information~~ dormant packet data call if the packet zone identifiers are different.

2-3. (Canceled)

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4. (Original) The method of claim 1, wherein an information transmission connection with the second base station is initialized after the mobile station completes an information transmission connection with the first base station in said handoff execution step from the first base station to the second base station.

5. (Original) The method of claim 1, wherein the packet zone identifier is transmitted from the second base station to the mobile station via a message in the information transmitted from the second base station.

6. (Currently Amended) The method of claim 5, wherein the message in the transmitted information is an in-traffic system parameter message.

7. (Currently Amended) A method of performing a handoff in a communication system, comprising:

performing a handoff of ~~a first call~~ an active call of a subscriber unit from a first fixed base station to a second fixed base station;

receiving an In-traffic System Parameter Message having a packet zone identifier uniquely identifying a packet control function coverage area from the second fixed base station over an air interface; and

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comparing the packet zone identifier of the second fixed base station transmitted in the In-traffic System Parameter Message with a packet zone identifier of the first fixed base station stored in the subscriber unit to perform a handoff of a concurrent second dormant packet data call, wherein the first call is an active call and the second call is a dormant packet data call if the packet zone identifiers are different from each other.

8. (Currently Amended) The method of claim 7, further comprising transmitting an acknowledge order from the subscriber unit to the second fixed base station to acknowledge receipt of the In-traffic System Parameter Message.

9. (Currently Amended) The method of claim 8, further comprising transmitting a Handoff Complete message from the second fixed base station to a switching center associated with the first and second fixed base stations to indicate that the handoff is complete.

10. (Currently Amended) The method of claim 7, wherein an information transmission connection with the second fixed base station is initialized after the subscriber unit releases an information transmission connection with the first fixed base station after the

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handoff of the concurrent ~~second dormant~~ packet data call from the first ~~fixed~~ base station to the second ~~fixed~~ base station.

11. (Canceled)

12. (Currently Amended) The method of claim 7, wherein the handoff of the ~~second information~~ concurrent packet data call is completed using ~~a~~ the Packet Control Function.

13. (Currently Amended) The method of claim 7, wherein the ~~second information~~ concurrent packet data call uses a Point-to-Point Protocol (PPP) to communicate with a Packet Data Serving Node.

14. (Currently Amended) The method of claim 7, wherein performing ~~a~~ the handoff ~~of a first call of the active call~~ comprises:

transmitting a handoff required message from the first ~~fixed~~ base station to a mobile switching center to determine if a handoff is necessary;

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transmitting a Handoff Request message from the mobile switching center to the second fixed base station to request a handoff to the second fixed base station if a handoff is necessary;

transmitting Null Forward Traffic frames from the second fixed station-base station to the subscriber unit to assist in acquiring the subscriber unit by the second fixed station-base station;

transmitting a Handoff Request Acknowledge message from the second fixed base station to the mobile switching center to acknowledge receipt of the Handoff Request message;

transmitting a Handoff Command message from the mobile switching center to the first fixed base station to initiate the handoff;

transmitting a Handoff Direction message from the first fixed base station to the subscriber unit to inform the subscriber unit of the handoff;

transmitting an Acknowledge Order message from the subscriber unit to the first fixed base station to acknowledge receipt of the Handoff Direction message;

transmitting a Handoff Commenced message from the first fixed base station to the mobile switch-mobile switching center to indicate that the handoff has commenced;

transmitting at least one of Reverse Traffic Channel Frames and a Preamble from the subscriber unit to the second fixed base station;

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transmitting a Handoff Completion message from the subscriber unit to the to the second fixed base station to indicate that the handoff has been completed; and

transmitting an Acknowledge Order message from the second fixed base station to the subscriber unit to acknowledge receipt of the Handoff Completion message.

15. (Currently Amended) The method of claim 14, further comprising:

transmitting an Acknowledge Order message from the subscriber unit to the second fixed base station after receiving the In-traffic System Parameter Message to acknowledge receipt of the In-traffic System Parameter Message;

transmitting a Handoff Complete message from the second fixed base station to the mobile switching center to indicate that the handoff is complete;

transmitting a Clear Command message from the mobile switch switching center to the first fixed base station to inform the first fixed base station that the subscriber unit may be cleared from the first fixed sation base station; and

transmitting a Clear Complete message from the first fixed base station to the mobile switching center to indicate that the subscriber unit has been cleared from the first fixed base station.

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16. (Original) The method of claim 7, wherein the communication system is a CDMA communication system.

17. (Currently Amended) The method of claim 7, further comprising transmitting a call initializing message of the ~~second~~-packet data call from the subscriber unit to the second ~~fixed~~ base station to request a dormant handoff of the ~~second information packet~~ data call if the packet zone identifiers of the first and second ~~fixed~~ base stations are different.

18. (Currently Amended) A method of performing a handoff in a mobile communication system, comprising:

performing an active voice call and a concurrent dormant packet data call with a first base station;

performing a handoff of an active fist ~~the~~ active voice call from a ~~the~~ first ~~fixed~~ base station to a second ~~fixed~~ base station;

receiving a packet zone identifier identifying a specific packet control function coverage area from the second ~~fixed~~ base station;

transmitting a packet data call initialize message to the second ~~fixed~~ base station if the packet zone identifier of the second ~~fixed~~ base station is different than the a packet zone identifier of the first ~~fixed~~ base station; and

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completing a dormant handoff using a Packet Control Function ~~if a second call is concurrently maintained on a single logical channel with the first call and the second call is a dormant packet data call~~ of the concurrent dormant packet data call when the packet zone identifiers are different from each other.

19. (Currently Amended) The method of claim 18, wherein the packet zone identifier is received from the second ~~fixed base~~ station in an In-Traffic System Parameter message.

20. (Currently Amended) The method of claim [[18]] 19, wherein a single subscriber unit maintains at least two calls on a single logical connection between a call controller and a switching center when the handoff is performed, ~~and wherein one of the calls is a dormant packet data call.~~

21. (Currently Amended) The method of claim 2018, wherein the packet zone identifier of the first ~~fixed base~~ station is stored in ~~the~~a subscriber unit to compare it to the packet zone identifier of the second ~~fixed base~~ station.

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22. (Currently Amended) A method of performing a dormant handoff, comprising:

performing a handoff of an active call from a first fixed base station to a second fixed base station;

receiving an In-traffic System parameter message from the second fixed base station, said In-traffic System parameter message including a packet zone identifier designating a zone coverage area for a packet control function processing packet data of the second base station; and

performing a dormant handoff of a dormant packet call that is concurrently maintained with the active call based on information in the In-traffic System parameter message.

23. (Canceled)

24. (Currently Amended) A user equipment for a communication system, comprising:

means for maintaining two concurrent calls on a single logical connection; means for performing a handoff of an active one of the two concurrent calls from a first fixed base station to a second fixed base station;

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means for storing a packet zone identifier uniquely identifying a packet control function coverage area of the first fixed base station;

means for receiving an In-traffic System Parameter Message having a packet zone identifier uniquely identifying a packet control function coverage area of the second base station from the second fixed base station over an air interface;

means for comparing the packet zone identifier of the second fixed base station to the packet zone identifier of the first fixed base station; and

means for performing a dormant handoff of a dormant one of the two concurrent calls, wherein the dormant call is a dormant packet data call.

25. (Currently Amended) The user equipment of claim 24, further comprising means for transmitting an acknowledge order to the second fixed base station to acknowledge receipt of the In-traffic System Parameter Message.

26. (New) The method of claim 1, wherein comparing the packet zone identifiers is performed by the mobile station.

27. (New) The method of claim 7, wherein comparing the packet zone identifiers is performed by the subscriber unit.

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28. (New) The method of claim 18, wherein a subscriber unit in the handoff compares the packet zone identifiers of the first and second base stations to determine if the packet zone identifiers are different.

29. (New) The method of claim 22, wherein performing the dormant handoff comprises:

comparing, by a mobile terminal in the handoff, the received packet zone identifier of the second base station with a packet zone identifier corresponding to the base station; and

performing the dormant handoff when the packet zone identifiers are different from each other.

30. (New) The user equipment of claim 24, wherein the means for comparing is performed by a user equipment in the handoff.

31. (New) A method of performing handoff in a communication system comprising:

receiving a message for a handoff of an active call by a subscriber unit;

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receiving an In-traffic System Parameter Message having an indicator uniquely identifying a current packet zone;

detecting a change in a packet zone based on the received In-traffic System Parameter Message; and

establishing a packet data service.

32. (New) The method of claim 31, wherein detecting the change in the packet zone comprises using the indicator in the received In-traffic System Parameter Message and an indicator of a dormant packet data session concurrent with the active call to detect the change in the packet zone.

33. (New) The method of claim 32, further comprising performing a handoff of the concurrent dormant packet data call if the indicators are different from each other.

34. (New) The method of claim 31, further comprising transmitting an acknowledge order from the subscriber unit to a target base station that transmitted the In-traffic System Parameter Message to acknowledge receipt of the In-traffic System Parameter Message.

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35. (New) The method of claim 34, further comprising transmitting a Handoff Complete message from the target base station to a switching center associated with the base stations performing the handoff to indicate that the handoff is complete.